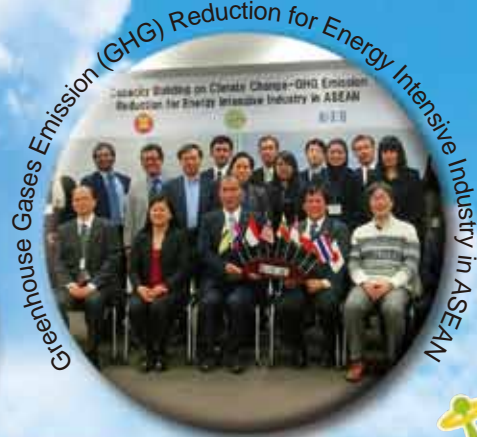


# ICETT



**NEWS**  
**VOL. 24**  
**NOV. 2016**

**INTERNATIONAL CENTER FOR ENVIRONMENTAL TECHNOLOGY TRANSFER**



Gririn



Pipi



## CONTENTS

(Entrusted by Mie prefectural government)	
1. ASEAN Environmental Forum in Mie .....	2&3
(Japan-ASEAN Integration Fund, (JAIF))	
2. Capacity Building on Climate Change .....	4
–Greenhouse Gases Emission (GHG) Reduction for Energy Intensive Industry in ASEAN–	
(Subsidized by JST)	
3. Japan-Asia Youth Exchange Program in Science (China) .....	5
(Entrusted by Yokkaichi City Government)	
4. Tianjin Seminar / Global Environmental Workshop for High Schoolers .....	6
(JICA Technical Cooperation Projects)	
5. Project for Total Emission Control of Nitrogen Oxide in the Atmosphere in China .....	7
(Entrusted by the Chubu Bureau of Economy, Trade and Industry)	
6. Projects to Support Entrance into New Business Fields .....	8
(Subsidized by the Interchange Association, Japan)	
7. Japan-Taiwan Industrial Cooperation Bridge Project .....	8&9
“Environmental Business Seminar and Business Negotiation Meeting in Taiwan”	
(Entrusted by the Ministry of the Environment)	
8. FY 2015 Water Environment Partnership in Asia (WEPA) Project .....	9
(CTI PFAN Programs)	
9. Support for Private Financing for the Clean Energy Project .....	10
(Entrusted by the Ministry of Economy, Trade and Industry)	
10. International Cooperation Project on Global Environment Clean Technology Business Network (CTBN) Construction Project .....	11
(ICETT)	
11. “Environmental Memorial Lecture” .....	12
–ICETT 25th Anniversary Commemorative Project–	

Entrusted by Mie Prefectural Government

# International Development Promotion Project utilizing environmental technologies ASEAN Environmental Forum in Mie

## Outline

Prior to the Ise-Shima Summit, held on May 26 and 27, 2016, Mie Prefectural Government, Yokkaichi City Government, and ICETT jointly held the ASEAN Environmental Forum in Mie, inviting guests, including ambassadors to Japan, from 10 ASEAN countries for opinion information exchanges on environmental conservation technologies and sustainable development.

## Background and purpose

The “2016 Junior Summit in Mie” was held under the theme of the “The planet for the next generations: The environment and sustainable society” at the main venue in Kuwana City, as an official event related to the Ise-Shima Summit, the G7 summit meeting held in Mie Prefecture on May 26 and 27, 2016. Meanwhile, with the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21, Paris, France) having been held to discuss the legal framework for greenhouse gas emissions reduction, environmental problems have become universal problems. In addition, among ASEAN countries, which are deeply related to Mie Prefecture, with the ASEAN Economic Community inaugurated on December 31, 2015, the movement for wider-area cooperation has gained strength. Based on this background,

Mie Prefectural Government, Yokkaichi City Government, and the ICETT, aiming to create an opportunity for opinion and information exchanges on

environmental conservation technologies and sustainable development, held the ASEAN Environmental Forum in Mie, inviting guests, including ambassadors to Japan, from ASEAN countries.



Full view of the Forum

- Technological capabilities of companies in Mie Prefecture enable us to contribute significantly to both the environmental and economic development of ASEAN countries.
- Mie Prefectural Government, ICETT, and Yokkaichi City Government will make a strong cooperative effort with economic organizations for the overseas development of companies in Mie Prefecture concerning the use of environmental technologies.
- I felt the strong cooperation among ASEAN countries. As such, if we start exchanges with one such country, our exchanges will expand to ASEAN as a whole.
- The first step for exchanges will be the gateway to ASEAN’s international cooperation. Mie Prefectural Government would like to deepen cooperation with ASEAN countries more actively.

## Content

(1) “ASEAN Environmental Forum in Mie”

Date: February 12, 2016

Theme: Sustainable economic development in ASEAN countries

Speakers and others:

Eikei Suzuki, Governor of Mie Prefecture (coordinator)

Ambassadors to Japan and others (panelists)

Number of participants: 363

The Forum was ended by Mie Prefecture Governor Eikei Suzuki’s speech, with the key points as follows:

### Panelists:

- H.E. Mr. Thurain Thant Zin  
Ambassador, Embassy of the Republic of the Union of Myanmar
- Mr. Bansarn Bunnag  
Ambassador, Royal Thai Embassy
- HE. Haji Mahamud bin Haji Ahmad  
Ambassador, Embassy of Brunei Darussalam
- Mr. Lao Nguon Eng  
Commercial Counselor, Royal Embassy of Cambodia
- Ms. Retno Supeni  
Minister Counselor, Embassy of the Republic of Indonesia
- Ms. Somsanouk Vongsack  
Deputy Chief of Mission, Embassy of the Lao People’s Democratic Republic
- Mr. Hedy Assan  
Deputy Chief of Mission / Minister Counselor, Embassy of Malaysia
- H.E. Mr. Manuel M. Lopez  
Ambassador, Embassy of the Republic of the Philippines
- Mr. William Tan  
Deputy Chief of Mission / Minister-Counselor, Embassy of the Republic of Singapore
- Mr. Nguyen Truong Son  
Deputy Chief of Mission, Embassy of the Socialist Republic of Vietnam

Related to the Forum, we implemented a Study Tour Program (2), an Exchange Program (3), and a Spouse Program (4) on the same day, and the Nansei Program (5) on the following day. Through these programs, we were able to form close relationships with the ambassadors to Japan and representatives of ASEAN countries, by introducing them to Mie Prefecture's beautiful nature and rich culture and tradition, Yokkaichi Pollution, and Yokkaichi City's traditional culture, and by boosting the appeal of the opening of the Ise-Shima Summit to both inside and outside Japan.

**(2) Study Tour Program**

Venue: Soranpo Yokkaichi

Outline:

At Yokkaichi Pollution and Environmental Museum for Future Awareness, we introduced participants to the historical background of Yokkaichi Pollution and



Study Tour Program

efforts towards environmental improvement, and showed the environment-friendly technologies that companies in Mie Prefecture have been developing.

We then went on a study tour to Yokkaichi Municipal Museum / Planetarium, and introduced participants to Yokkaichi's culture and the beauty of starry sky in the city. This tour provided an opportunity both to introduce environmental technologies and to encourage exchanges through culture.

**(3) Exchange Program**

Venue: Yokkaichi Miyako Hotel

Outline:

Ambassadors to Japan and representatives of ASEAN countries learned about Mie Prefecture's charms through broad interactions with corporate engineers in Mie Prefecture and by experiencing traditional performing arts and food ingredients produced in Mie Prefecture.

**(4) Spouse Program**

Venue: Banko no Sato Hall

Outline:

Through the hands-on activity of making Banko ware, Yokkaichi City's main craftwork, participants experienced the prefecture's traditional craft that uses distinctive features of local products.



Spouse Program

**(5) Nansei Program**

Venue: Ise-Shima Area, including Mikimoto Pearl Island

Outline:

Toward the opening of the Ise-Shima Summit, we arranged this program, so that ambassadors to Japan and representatives of ASEAN countries were able to learn about Mie Prefecture's charms, such as the beautiful nature and the varied culture of the prefecture.



Nansei Program

**Results and prospects**

Exchanges at ASEAN Environmental Forum in Mie provided ICETT with the first step to international cooperation, and an opportunity to deepen its ties with companies, universities, and research centers in ASEAN countries when it developed in 10 ASEAN countries.

Furthermore, we were able to demonstrate to the ambassadors to Japan and representatives of 10 ASEAN countries our expertise to deal with pollution learned from the experience of Yokkaichi Pollution and the environment-friendly technologies owned by companies in the prefecture, as well as the varied culture and local products of which Mie Prefecture is justly proud.

(Hide Mashita)

**(Column) Junior Summit in Mie**

From April 22 to 28, the "Junior Summit in Mie" (organized by the Ministry of Foreign Affairs as an event related to the G7 summit meeting & Ise-Shima Summit) was held in Kuwana City, the main venue. In connection with this event, ICETT also introduced its environmental technology transfer at the Yokkaichi Pollution and Environmental Museum for Future Awareness.

Furthermore, in the Junior Summit, we had a discussion under the theme, "The planet for the next generations: The environment and sustainable society," and announced the discussion results as the "Kuwana Junior Communiqué."



Participants in the Junior Summit

# Capacity Building on Climate Change

## —Greenhouse Gases Emission (GHG) Reduction for Energy Intensive Industry in ASEAN—

### Outline

Using Japan-ASEAN Integration Fund (JAIF) as a financial source, ICETT held human resource development training related to greenhouse gas emissions reduction, inviting 14 administrative officials and university researchers from eight ASEAN countries—2 from Brunei, 2 from Cambodia, 2 from Indonesia, 1 from Malaysia, 2 from Myanmar, 2 from the Philippines, 1 from Singapore, and 2 from Thailand, as well as 1 joint proposer from the Philippines.

### Background and purpose

This training program was jointly proposed by ICETT and the Sub-Committee on Sustainable Energy Research (SCSER), which is an organization under the ASEAN Committee on Science and Technology (COST). The aim was to develop human resources involved in energy in the ASEAN region, to disseminate energy saving, and to promote exchanges in the ASEAN region and Japan.

### Details

This training was initially proposed with the aim of reducing greenhouse gas emissions from industries with massive consumption of energy, and was implemented as training focusing on energy saving.



Study tour at a factory

In the training, following the keynote speech, which was intended to promote awareness of the perspective of factory managers on energy saving, participants went on study tours at an

electric apparatus manufacturer in Aichi Prefecture, an implementation site of PDCA cycle that was originated in the visualization of energy consumption measured by beer brewers, and various implementation sites of energy-saving activities that focus on the thermal energy process. After that, they received technical guidance on the thermal energy process and learned about examples of how to diagnose energy-saving at a lecture venue in Tokyo. Training participants showed great interest in the diagnostic method.

On the final day, we held a workshop inviting people involved in energy, including both Japanese officials and non-officials. The Japan side made presentations on its experience of establishing the Energy Conservation Law and energy conservation policies; ASEAN's actual situation and problems from a perspective of its support activities for ASEAN's energy conservation; and the latest trend of the

Joint Crediting Mechanism (JCM), which is expected to be a support for dissemination of energy saving in the ASEAN region. Each training participant then made a presentation on their own countries' problems and expectations for Japan. After that, under the theme of ASEAN's limit, Japan's problems, and future possibility of cooperation between ASEAN and Japan, all participants actively exchanged their opinions, describing their beliefs and ideas. In the future, we can expect the dissemination and development of efforts to reduce greenhouse gas emissions by using the knowledge and network that Japan and ASEAN shared in this training.

Thanks to the good weather during the training period, after every schedule was completed as planned, training participants seemed to actively enjoy nature at ICETT which is surrounded by greenery, and sightseeing in Tokyo Metropolitan, albeit only for a short period of time, and gave us many comments that they found the training very educational and meaningful.

### Prospects

Training participants were quite impressive when they actively asked questions and held discussions in an attempt to learn from examples of energy-saving efforts in Japan and other participants' countries.

Through this training and interactions with other participants they sought to identify what they should improve by comparing such examples with the energy-saving status of their own countries. In conclusion, I would like to express my appreciation to all people who received trainees, and to the instructors for their warm welcome. (Akiko Kise)



Participants in a workshop

Subsidized by JST

# Japan-Asia Youth Exchange Program in Science (China)

## Outline

Based on a subsidy from the Japan Science and Technology Agency (JST), ICETT invited young researchers from China, and implemented a training program to deepen exchanges between these researchers and enterprise employees from universities and various industries in Japan.

## Background and purpose

The Japan-Asia Youth Exchange Program in Science (Sakura Science Plan) aims to deepen exchanges in the field of science and technology between outstanding young people who visit Japan from other Asian countries and young people in Japan—both of whom will become leaders in the future. This program was launched in fiscal 2014 by the Japan Science and Technology Agency (JST) with the various aims, such as to enhance interest of young people outside Japan in Japan's state-of-the-art technologies, to develop excellent human resources from overseas sought by universities, research institutes, and companies in Japan, and to contribute to the development of science and technology in Japan and other Asian countries.

Inviting researchers involved in the field of environmental conservation from Zhuzhou City, Hunan Province, and Sichuan Province, China, to meet the requests from these two provinces, ICETT implemented training programs under the themes of "Research on Japan's Environmental Management Technologies and Environmental Technology Transfer" and "Case Study on Regional Environmental Management (such as environment-conscious agriculture and recycling)," respectively.

## Details

(1) Research on Japan's Environmental Management Technologies and Environmental Technology Transfer

Zhuzhou City, Hunan Province, China is an industrial city located in the southern part of this country. Despite its efforts in adopting measures against environmental pollution by taking the initiative to make all public buses electrically powered, this city still has a high demand for technologies to prevent pollution and to solve pollution problems suitable for its rapidly-developing industries.



Introducing research contents at Nagoya University

Thirteen representatives were invited from companies in Zhuzhou City that play leading roles in advanced science and technology transfer inside and outside the country, including environmental conservation technologies, and from Hunan University of Technology, which links to the city's key industries. The participants could deepen their understanding of environmental conservation technologies and technology transfer by learning about Japan's efforts in the field of environmental conservation and how the related technologies are used through examples based on Japan's experience of four major pollution problems. Trainees showed great interest in Japan's efforts based on industry-government-and university cooperation concerning the coexistence of industries and the lives of its residents. Presentations were given with the aim of introducing respective research activities at Nagoya University, measures for environmental conservation by chemical plants inside and outside Mie Prefecture, and study tours and



Study tour at a greenhouse that uses waste heat

lectures related to consideration for surrounding areas.

(2) Case Study on Regional Environmental Management (such as environment-conscious agriculture and recycling)

Sichuan in China, which is well-known for its world heritage sites, is an agricultural area with a mild climate and fertile soil despite its location in an inland area. In particular, Chengdu in this province continues to develop as China's leading high tech industrial city, which is considered to be a central city for China's national project, "China Western Development." In recent years, while industrialization intended for modernization and the improvement of productivity has also advanced in terms of agriculture in this province, with some issues remaining in proper fertilization and pest control, there is a concern about the pollution of agricultural irrigation water and of discharges into the destination waters. Furthermore, matters such as waste disposal issues, improvement of energy efficiency, and raising residents' awareness, which accompany the commercial development and improved standards of living, are considered as important tasks.



Practicing Japanese-style separation of garbage

Three university lecturers invited from Sichuan Province, who are specialists in agriculture and energy conservation, engaged in active opinion exchanges on such matters as effective use of agricultural waste, and Japan's farming system that seeks multi-functional effectiveness in agriculture for not only food production but also in maintaining ecosystems and natural disaster control. Also, one participant expressed the desire to introduce Japan's high quality vegetable cultivation in greenhouses that uses plant waste heat into agriculture in China, a country with a growing demand for the safety of agricultural products.

## Results and prospects

Through lectures in line with each theme and interactions with people concerned, 16 invited researchers learned about Japan's efforts in environmental conservation in each field, and differences between Japan and China in those fields in a positive fashion. We received comments from the invited researchers regarding their hope to share the information they gained from this program with people involved in related fields after they return to China, and to integrate the technical methods and new ideas they learned in Japan into their own research and work. We can certainly expect that those invited, as well as Japanese companies and organizations, taking the opportunities given, will advance their exchanges and cooperation in the future. (Ayako Okuda)

Entrusted by Yokkaichi City Government

# Tianjin Seminar / Global Environmental Workshop for High Schoolers

## Outline

As part of Yokkaichi City's exchanges with its friendship cities, ICETT held the "Tianjin Seminar," which combines a local seminar and study tours in Japan, aiming to solve environmental problems in Tianjin City, the People's Republic of China; and "Global Environmental Workshop for High Schoolers," training, which targets high school students in three countries—Japan, China, and the U.S.

In fiscal 2015, programs were implemented respectively in the Tianjin Seminar under the theme "Air Pollution Control Measures and Technologies" and in the Global Environmental Workshop for High Schoolers under the theme "Symbiotic Relationship with Nature."

## (Tianjin Seminar)

### Background and purpose

Although Tianjin City is an area with rapid economic development, the city has growing air pollution problems and is facing urgent challenges to improving the situation. Thus, this training aims for officers of the Tianjin Environmental Protection Bureau and other related agencies to understand Japan's environmental technologies and management methods, and to make effective use of their understanding for Tianjin City's environmental improvement.

Furthermore, using the "Co-benefit Type Environmental Pollution Control Measure Promotion Project in the Asian Region," for which Yokkaichi City cooperates and collaborates with the Ministry of the Environment in this fiscal year as in the previous fiscal year, we improved and strengthened the content of the Seminar.

### Contents

#### (1) Environmental Conservation Seminar held in Tianjin City

Over the two days of October 27 and 28, 2015, we held a local seminar in Tianjin City. In the local seminar this fiscal year, specialists from Japan and China made presentations on "Air Pollution Control Measures from Harbors and Ships," "Air Pollution Control Measures from Non-road Mobile Machines," and "Judging and Assessing Damage Caused by Environmental Pollution."



Tianjin Seminar

With regard to "Judging and Assessing Damage Caused by Environmental Pollution," we were able to successfully and safely end the Seminar using a new style of an open-ended discussion in small groups that enabled participants to deepen their understanding.

#### (2) Training in Japan

In the Training in Japan, we held study tours in Japan for 16 days from November 16 to December 1 for four members including officers of the Tianjin Environmental Protection Bureau. After learning about Yokkaichi City's efforts from the outbreak of Yokkaichi Pollution to implemented improvements via a study tour at the Yokkaichi Pollution and Environmental Museum for Future Awareness, participants went on a study tour in Isozu, a town that suffered significant damage from Yokkaichi Pollution, and at industrial complexes in Yokkaichi City.

We also held a training session in Kobe, a city that has established a friendship city relationship with Tianjin City. In addition, with participants visiting an automobile examination field, a thermal power plant, and a car body plant, the training contents offered practical knowledge, which directly supported participants' businesses.

## Results and prospects

Although much still needs to be done to improve the environment in Tianjin City, recognition of its necessity by participants from Tianjin City side is changing. I feel that efforts are needed to tenaciously continue our training activities so that we can contribute to Tianjin's environmental improvement as much as possible.

(Akihiro Tsuchiguchi)

## (Global Environmental Workshop for High Schoolers)

Inviting high school students from Tianjin and Long Beach, California, friendship city and sister city, respectively, of Yokkaichi City during the summer vacation period every year, the Global Environmental Workshop for High Schoolers aims to deepen mutual understanding between these high school students and high school students from Yokkaichi City through opinion exchanges on such topics as environmental problems. This fiscal year, the Global Environmental Workshop for High Schoolers was held for eight days from July 27 to August 3, 2015 under the theme, "Symbiotic Relationship with Nature."

### Contents

This fiscal year, participants visited the Yokkaichi Pollution and Environmental Museum for Future Awareness, which had just opened on March 21, 2015, and learned about the history of Yokkaichi Pollution from its development to conquest, and about the environmental improvement activities that were conducted jointly by citizens, businesses, and governments. Furthermore, trainees participated in an eco tour to Toba and Ise Shrine, as well as joined in the Great Yokkaichi Festival wearing Japanese summer kimono.



Experience of wearing Japanese summer kimono

## Results and prospects

During the eight-day training period, participants, through their communal living in ICETT, deepened their insights into environmental problems from an international perspective by reviewing and comparing with their own countries. I hope that the experiences in the Global Environmental Workshop for High Schoolers this time will provide participating high school students with an opportunity to expand into the world in the future.

(Kana Mizutani)

## JICA Technical Cooperation Projects

# Project for Total Emission Control of Nitrogen Oxide in the Atmosphere in China

### Outline

In recent years in China, serious air pollution has occurred accompanying activities for economic development. Also, in the country's 13th five-year plan, which has been in effect since 2016, after a severe reduction target was set for air contaminants, various efforts have been implemented to achieve the targets. Forming a JICA specialist team with Suuri-Keikaku Co., Ltd., ICETT implemented a JICA Technical Cooperation Project to support total emission control of NO<sub>x</sub> (nitrogen oxide), which is a major factor in air pollution, from both technical, political and institutional perspectives.

## Background and purpose

Adding NO<sub>x</sub> as one of the targets for the total volume of greenhouse gas reduction during the 12th five-year plan by 2015, China realized important improvements through achieving the target. Also, in the 13th five-year plan, which has been implemented since fiscal 2016, measures toward achieving the set targets will continue to be implemented in various industrial fields. Following the request for support received by the Japanese government from the Chinese government, this project has now been implemented for three years from March 2013 to March 2016 in order to promote China's measures to control overall NO<sub>x</sub> emissions.

## Details

Aiming to improve China's NO<sub>x</sub> control methods, this project set two targets: (1) Prepare technological guidelines related to the control of NO<sub>x</sub> emissions, and utilize the guidelines; and (2) The method to understand the effectiveness of NO<sub>x</sub> controls will be improved through the Simulation of Spreading Air Pollutants. ICETT was in charge of activities toward achieving the target (1).

Listed below are the main activities for which ICETT was responsible:

### ① Understanding the NO<sub>x</sub> emissions at a model company and proposing improvement measures

After selecting a model company, which was related to the target fields in the technological guidelines in Xiangtan City, Hunan Province, we measured air pollutant emissions at all points of the production process that are considered to have a large amount of NO<sub>x</sub> emissions, and proposed effective NO<sub>x</sub> control measures based on the measurements. In the model company, we have been discussing specific measures that require large-scale improvement work with local engineering companies. Meanwhile, low-cost measures with smaller improvement projects have already been launched and have yielded results. Furthermore, related information is shared in the same industry through methods such as announcing the results in an industry paper in China.



Measuring emissions of pollutants in a model company

### ② Training in Japan

We implemented an 11-day training course in Japan, inviting administrators who engage in work to help prevent air pollution in China. This training provided an opportunity to consider control methods applicable in China. Trainees learned about legal systems, roles of local governments, and efforts by companies that are emissions sources, all of which were related to NO<sub>x</sub> emission controls.

### ③ Holding seminars, etc.

During the approximately three-year implementation period of this project, we held seminars and technological exchange meetings mainly for administrators in China, companies belonging to key industries for NO<sub>x</sub> emissions control, and manufacturers of environmental conservation facilities. In the technological exchange meetings, through the participation of Japanese companies offering NO<sub>x</sub> control technologies, opinions were actively exchanged regarding the actual situation of China's measures for NO<sub>x</sub> emissions control, and Japan's control technologies applicable in China.

### ④ Preparing technological guidelines

Based on the activities mentioned above, we described the NO<sub>x</sub> control technologies applicable in China in the technological guidelines. The guidelines target such fields as cement production, coal-fired power generation, industrial boilers, and coke ovens and steel-making furnaces, all of which are considered to be key industries. In creating the guidelines, we tried to make them easy to use in China, by holding a study session regarding details of the technological guidelines with Chinese specialists from related fields. The completed guidelines were distributed to corporate workers in charge of environmental management and administrators from relevant regions in the Workshop for Disseminating Technological Guidelines, thereby helping the guidelines to become more widely known in China.



Workshop for Disseminating Technological Guidelines

## Results and prospects

Although this project ended in March 2016, we can certainly expect that the contents of the guidelines will be revised based on new rules and regulations with the Ministry of Environmental Protection of the People's Republic of China taking the lead, and further disseminated in the future. (Ayako Okuda)

Entrusted by the Chubu Bureau of Economy, Trade and Industry

## Project for Support Entering into the Business for the Environment (Project to Support Entrance into New Business Fields)

### Outline

ICETT, commissioned by the Chubu Bureau of Economy, Trade and Industry, implemented various activities to facilitate companies in the Chubu region of Japan to expand and enter the businesses for the environmental in Japan and overseas countries. These activities intended to develop new environmental technology through industry-university, and industry-industry cooperation, to expand the business by fostering cooperation with Japanese companies inside and outside the region, and also with companies in Indonesia and Vietnam.

### Background and purpose

The Chubu region is characterized with a concentration of manufacturing firms focusing on “arterial industries” (industries involved in stage from resource to final product) such as the automobile industry and aircraft industry. Advanced environmental technologies have been developed to support these manufacturing industries, which has made the Region also characterized with a concentration of companies with environmental technologies such as waste utilization technology and sewage and wastewater treatment technology.

With identified high potential in the Region of development of business with environmental technologies, various supporting activities were implemented to facilitate companies in the Region to expand and start business activities related to the environment.

### Contents

#### (1) The Environmental Business Alliance Matching Seminar

Companies in the Chubu region participated in the Environmental Business Alliance Matching Seminar organized by Kanto, Kansai and Kyushu Bureau of Economy, Trade and Industry to seek for the opportunity of new business cooperation with companies outside the Chubu region. ICETT supported those companies for their effective presentation.



#### (2) Group meetings on Environmental Technology Development and Market Development

Study groups on development of new environmental technologies and expansion of business for the environment were formed by the Chubu Bureau of Economy, Trade and Industry in 2014. The project provided the existing and new group members with an opportunity of discussion and information sharing.

#### (3) Seminar on Industry-University Cooperation

The Seminar was organized to facilitate cooperation between industry and academia in the Region for the development of new environmental technology. The Seminar focused on ceramic technology, which is a representing industry in the Region, and metal recovery technology, which have been getting more required. The

leading researchers introduced their research seeking for cooperation with industry.

#### (4) Seminar on Industry-Industry Cooperation (Presentation of Technological Needs by Large Corporations)

The Seminar was organized to support environmental technology providers in the Region to start new business and technology cooperation with large companies. At the Seminar, those large companies explained their technology needs. After the Seminar, technologies and solutions which could satisfy these technology needs were proposed from the technology providers in the Region to the large companies.



#### (5) Business Missions to Indonesia

A Business Mission was organized to Jakarta, West Java and Banten, Indonesia, where environmental problems has been becoming more and more serious along with fast economic growth. Seven companies in the Region with water-related technologies participated in the Mission and discussed with Indonesian companies about business possibility.

#### (6) Business Missions to Vietnam

Vietnam is another country where environmental degradation has been caused due to industrialization. A Business Mission to Southern Vietnam as a cooperation project of METI Chubu, JETRO Nagoya, and JICA Chubu, and ten companies participated had discussions with local governments and companies.

### Prospects

ICETT believes that facilitating transfer of Japanese environmental technology in business circumstances contributes to achieve our mission to contribute to conservation of global environment and sound development of global economy while appropriately conserving global environment. We also believe that the technology transfer has been more and more required in various overseas countries with enhanced consciousness to the environment. ICETT will support the business for the environment in cooperation with METI Chubu and other Japanese, overseas and international organizations with the same mind.

(Naoko Kuroda, Eiichi Masuda)

Subsidized by the Interchange Association, Japan

## Japan-Taiwan Industrial Cooperation Bridge Project “Environmental Business Seminar and Business Negotiation Meeting in Taiwan”

### Outline

Receiving a subsidy from the “Japan-Taiwan Industrial Cooperation Bridge Project,”\*\* implemented by the Interchange Association, Japan\* in order to provide support for overseas market cultivation for Japan’s environmental technologies and for Japanese companies to find their overseas partners, ICETT held an Environmental Business Seminar, business negotiations with Taiwanese companies, and a factory tour in Taipei, Taiwan.

(\* This is Japan’s contact organization for Taiwan intended to maintain a business relationship with Taiwan, a country with which Japan has no official diplomatic relationships. \*\* Led by the Taiwan Ministry of Economic Affairs Industrial Development Bureau, this project promotes industrial cooperation between Japan and Taiwan focusing on 11 industries.)

### Background and purpose

Aiming to promote independent and active private sector-led market cultivation by and business exchanges between Taiwanese companies and Japanese companies with competitive and excellent products and/or technologies in the environmental field, ICETT held the second environmental business negotiation meeting in Taipei in October 2015. (\*\*\*) The Taiwan Ministry of Economic Affairs is similar to Japan’s Ministry of Economy, Trade and Industry.)

### Contents of the implementation

As a result of concrete interviews and discussions on the needs for environmental technologies in Taiwan learned in past visits to related organizations, universities, and companies with which we have connections, we have decided the theme of this project to be “Valuable Recovery from and Recycling of Industrial and General Waste, and Wastewater Treatment & Water Purification.”



This time, we decided to hold the meeting to coincide with the “Taiwan International Green Industry Show,” aiming for the participation of many more companies from broader areas in Taiwan by holding the meeting in a conference room of the Taipei World Trade Center Nangang Exhibition Hall (TWTC Nangang), the venue of the Taiwan International Green Industry Show in cooperation with Taiwan Trade Center (TAITRA).



Seminar in Taiwan

This event was attended by 17 people from 10 Japanese companies from the Chubu region as well as from Tokyo and Osaka, and 36 people from 26 Taiwanese companies. The business negotiation meeting ended as a great success since we were able to feel the enthusiasm of Taiwanese companies—visitors from Taiwan to the Show unofficially joining the meeting in addition to companies that had registered for the meeting in advance, and Taiwanese companies that were unable to attend the meeting on that day directly contacting Japanese companies to have an interview the following day.

On the day before the business negotiation meeting, we held seminars under such themes as “Points for doing Business in Taiwan,”

and “Management System to Recycle Industrial Waste in Taiwan.” On the day after the business negotiation meeting, we offered study tours at a sewage treatment facility and a resource recycling facility in an industrial park in Taiwan.

## Results and prospects

A total of 65 business negotiations was held. Since the end of all of the events, participating Japanese companies have made efforts to capture business opportunities while actively deepening their exchanges with Taiwanese companies by holding interviews with Taiwanese companies on their next visit or by inviting Taiwanese companies to their product presentations held in Japan.

Meeting the demands of participating companies, ICETT has followed up on the business negotiation meeting. In the future, ICETT will also help spread Japanese companies’ excellent environmental technologies to Taiwan and other countries. (Maki Tamura)



Business negotiation meeting

## Entrusted by the Ministry of the Environment

# FY 2015 Water Environment Partnership in Asia (WEPA) Project

### Outline

Water Environment Partnership in Asia (WEPA) was proposed by the Ministry of the Environment in order to solve water environment issues in the Asian region. First implemented in 2004, its purpose is to promote dialogs and develop human resources toward solving water environment issues through a network of 13 partner countries\*. ICETT was entrusted with and implemented operations of the Secretariat for the Project in FY 2015. (\* Cambodia, China, Indonesia, Japan, South Korea, Laos, Malaysia, Myanmar, Nepal, the Philippines, Sri Lanka, Thailand, and Vietnam)

## Background and purpose

In the WEPA Project, now in its third period since fiscal 2014, ICETT aims to formulate an action program (hereinafter, “AP”) intended to solve issues for strengthening Water Environment Governance, and to accumulate concrete knowledge by increasing and sharing support cases for the AP among WEPA partner countries.

## Contents

In the AP regarding large-scale and intensive drainage of waste water from pig farms, which was proposed by Vietnam, we implemented inventory surveys for the drainage of waste water from pig farms in four specified provinces, reported on the results at the Stakeholder Meeting held in Hanoi, and shared actual situations and problems of the management and disposal of livestock waste water in Vietnam and other people concerned.



Stakeholder meeting

With regard to the basic plan for “AP regarding underground water,” which was submitted from Sri Lanka, we researched the current situation in Colombo at the initial stage, and then provided support for the AP for the period from the basic plan to the formulation of a rough draft.

The 11th WEPA Annual Meeting was held on January 26, 2016 in Vientiane, Laos. At the meeting, attended by 46 people from 12 WEPA partner countries except Indonesia, in addition to WEPA’s activity report and presentations on WEPA’s plan for the next fiscal year, WEPA partner countries exchanged information on the “Management of Livestock Waste Water,” the theme of the AP, which

was previously implemented in Vietnam and still ongoing.

In the Workshop conducted the day before, participants engaged in a group discussion under the theme of “industrial waste water,” from the perspective of promoting companies’ compliance with laws and regulations, on such matters as “strengthening the enforceability of laws and regulations by local governments that are actually responsible for regulations,” “strengthening support for local governments,” and “measures for improving incentives for companies.”

Furthermore, at the 7th World Water Forum held in April 2015 in Daegu and Kyungpook, South Korea, we participated in the session on “Strengthening Frameworks for Water Management and Governance” and transmitted information through distributed materials related to WEPA at the Ministry of the Environment’s booth within the Japan pavilion.



Annual meeting

## Results and prospects

The WEPA will continue to do activities that aim to establish a more favorable water environment by strengthening capabilities through sharing of experiences and knowledge on water environment in partner countries. (Maki Tamura)



Workshop

## CTI PFAN Programs

# Support for private financing for the Clean Energy Project

### Outline

The CTI Private Financing Advisory Network (CTI PFAN) aims to reduce greenhouse gas emissions by providing support through multilateral partnerships among public and private organizations on a global scale for clean energy business operators, who seek private financing, and by acting as a bridge between these business operators and investors/financiers.

### Background and purpose

Clean energy business operators generally suffer in acquiring business funds. To acquire funds, such business operators need to prepare business plans with which they can verify the validity of their business models from the viewpoint of an investor. For that purpose, receiving guidance from specialists in business fund acquisition is effective. As such, CTI PFAN seeks clean energy business operators who wish to receive guidance on preparing a business plan through public invitation, and selects target businesses for guidance based on their business proposals. Selected clean energy business operators will receive individual evaluations and guidance on formulating their business plans. Furthermore, the business operators can create improved business plans after receiving individual guidance from specialists in business fund acquisition. The clean energy business operators who have passed the second screening by fund acquisition specialists based on their business plans, can then make presentations to investors and financiers at the Financing Forum.

### CTI PFAN's Africa Program

Energy shortage is the most serious problem that Africa is currently facing, with 65% of its population unable to use energy. Since people rely on firewood as fuel, more than 600,000 women and children die every year due to the effects of interior air contamination from cooking (announced by African Development Bank).

In 2015, targeting West Africa, following the workshops held in Senegal and Ghana in February and March, and the Financing Forum held at the African Development Bank in Côte d'Ivoire in September, 10 presentations were then made in front of investors and financiers. After the end of the Forum, we continued to give guidance to clean energy business operators who aimed to acquire business funds. The West Africa Program is operated with the support of USAID (United States Agency for International Development).

In fiscal 2016, we are engaging in support activities for business operators in East Africa with a subsidy from Sida

(Swedish International Development Cooperation Agency).  
(Tohru Hasegawa)



West Africa Financing Forum  
(Governor of the African Development Bank and the winner)

### CTI PFAN's Asia Program

In fiscal 2015, 43 applications were made for our invitation to clean energy business opportunities in the Asian region. Among these applications, we selected the 10 top ones and introduced them at the Financing Forum held in Singapore on January 29, 2016. The forum was attended by around 90 people, including investors and representatives from financial institutions and investment consulting firms. Following rigorous screening by four judges, an energy-saving project at a public facility in Indonesia was selected for the Best Award (see the photo), and the Award of Excellence was presented to three projects: a photovoltaic power generation project (Cambodia), a biomass project (India), and a biomass cooking stove project (India).



Best Award winning project developer

At the end of the Forum, we received inquiries from investors from more than ten companies and investment and consulting firms, and are still continuing our support for those businesses' fund-raising. (Hiroyuki Ueda)

Entrusted by the Ministry of Economy, Trade and Industry

# International Cooperation Project on Global Environment Clean Technology Business Network (CTBN) Construction Project

## Outline

Technological transfer and dissemination that can contribute to measures against global warming in developing and emerging countries require proper matching between technological needs and corresponding technologies, the development of effective and practical projects for measures against global warming, and the commercialization of such projects through completion of financing. Aiming to promote these efforts, we have been preparing for the construction of CTI's Clean Technology Business Network (CTBN) since 2013.

## Background and purpose

The CTI (Climate Technology Initiative), in which the Japanese government participates, is planning to construct a CTBN intended for small and medium-size enterprises in CTI member countries to transfer technologies to developing countries, and to provide effective support for promoting the development of projects as a new program.

This project aims to contribute to the construction of CTBN by transferring effective technologies for against global warming owned by small and medium-size enterprises in Japan, by establishing a support scheme intended to promote project development, and by proposing the scheme as a model business plan originated in Japan.

## Details

Specifying the Philippines as the target developing country, this project provided a series of support measures for the development of projects and to match Japanese small and medium-size enterprises that own technologies for measures against global warming with project developers in the Philippines, and then verified the effectiveness of the support. Details of the provided support are as follows:

- Identified and selected project developers and specified technological needs in the developing country (the Philippines).
- Extracted and selected Japanese small and medium-size enterprises with high matching likelihood for specified needs.
- Provided opportunities for match making between project developers in the developing country and Japanese small and medium-size enterprises; held a web seminar and CTI CTBN Business Matching Forum in the Philippines.
- Provided individual based support for companies by specialists.
- Provided information on technological needs owned by project developers in the developing country; and transferred technological and related information owned by Japanese companies into database, and then made the information available.

Furthermore, in the course of constructing the CTBN, we positioned consultants who offer information, knowledge, and advice necessary to form and commercialize a project in a developing country to small and medium-size enterprises in Japan as CTBN specialists.

## Results and prospects

The entire series of support activities that we conducted through this project have been confirmed to be effective for technological matching between Philippine companies and small and medium-size enterprises in Japan, as well as for the actual development of such projects.

In particular, the Business Matching Forum, which was held in the Philippines, was attended by 11 Japanese companies and 20 local companies (project developers) that were selected in advance, and achieved excellent results, leading to the conclusion of business negotiations between three Japanese companies and several local companies.

After providing an opportunity for business matching, we were able to enhance the knowledge and expertise of Japanese companies through individual follow-ups, such as by offering advice from CTBN specialists, and by holding a workshop under the theme of financing a project in Japan.



Business Matching Forum in the Philippines (January 21)

Through these efforts, all 11 of the participating Japanese companies in the Forum were able to take the next step toward the development of projects with local companies.

Based on the results described above, we are currently formulating a CTBN model business plan originated in Japan. We are also preparing to make a proposal for the CTI. (Yasuko Ozaki)

# “Environmental Memorial Lecture” ICETT 25th Anniversary Commemorative Project

## Outline

Since its founding in 1990 under the principle of the conservation of the global environment, ICETT had implemented projects in approximately 90 countries to the time it marked its 25th Anniversary in 2015. Also, Mie Prefecture had made an appeal at the ASEAN Environmental Forum in Mie to various foreign countries before the opening of the Ise-Shima Summit in May 2016. As such, this time the Forum was held in the same prefecture as the venue of the Summit. The Forum expected to cause a ripple effect for the entire prefecture and transmit its information to other Asian countries and across the world, making use of the network of ICETT, an organization that engages in environmental conservation on an international scale. Furthermore, the Environmental Memorial Lecture, which was integrated into the program of the Forum as ICETT’s 25th Anniversary Commemorative Project, welcomed the well-known Japanese astronaut, Mamoru Mohri.

## Background and purpose

The Environmental Lecture Meeting provides many people, including the citizens and companies in Yokkaichi City, with an opportunity to learn about ICETT’s activities, and has been held once every five years as an ICETT’s self-initiated project in Yokkaichi City. By inviting prominent individuals who have precious experience and knowledge in environmental activities, the meeting provides the opportunity for those attending to enjoy thinking about what they can do to protect global environment.

This time, we warmly welcomed Mamoru Mohri, an astronaut and the director of the National Museum of Emerging Science and Innovation, who presented a lecture titled “Perspective from the Universe—Web of Life.”

## Details

Dr. Mohri has enabled many people to dream about the universe as an astronaut who boarded the space shuttle for the first time among Japanese people. During his missions, he transmitted scenes of experiments in a gravity-free space and the beauty of the earth seen from the space shuttle to Japanese people. He still continues to communicate how valuable the earth is, as the only planet inhabitable for living things, as well as the influence our human life is having on the earth, through the mass media and at the National Museum of Emerging Science and Innovation.

In his lecture, Dr. Mohri said as follows:

“It was 10,000 years ago when human beings began to rapidly



Lecture

increase in number on the earth. As the earth’s climate fortunately became stable, agriculture, the first scientific technology of human beings, began, and the human population increased explosively. With the population having reached 7.3 billion after the Industrial Revolution, human beings began to affect the atmosphere and water environment purely for their own convenience. When seeing the earth from the International Space Station, we can identify not

only cities and towns where people live, but also the places where petroleum and coal are burned. During my second voyage into space in 2000, which was eight years after my first space travel in 1992, we saw even more environmental changes. However, the earth was still blue and beautiful, and allowed us to feel that the earth was the only habitable planet for creatures in the universe.

We are surely living in an age where we can see the web of life with people always being stationed at the Space Station, and being able to understand all the environmental variables in real time. Let’s share not only national but also individual ideas, making full use of science and technology, such as the internet! Next year, the National Museum of Emerging Science and Innovation, to which I belong, will hold the Science Centre World Summit, an international conference where representatives from science centers in various regions in the world will gather. Under the theme, “Connecting the World for a Sustainable Future,” I would like to explain how Japanese science and technology can contribute to the world.” (Excerpt from a summary of his lecture)

## Results and prospects

In the Q&A session at the end of his lecture, Dr. Mohri was able to interact with the audience in a friendly atmosphere.

In response to one question, “In the Space Station, missions are conducted through close cross-border cooperation. Can this also give us a clue to making efforts to conserve the global environment?” Dr. Mohri suggested “There were only six crew members in the Space Station. We are in a state of great tension in space because if only one of the crew members makes a mistake in their operations, all of us may be unable to return to the earth. Currently, however, countries around the world have yet to share a sense of crisis in terms of environmental conservation. That’s why information obtained by making full use of science and technology and ties between countries are so important.” (Yuka Kanda)



Dr. Mamoru Mohri